Facilitating Cognitive Justice: Innovative Co-Creation with Indigenous Knowledge-holders

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Abstract

Facilitation of co-creation with indigenous knowledge-holders remains to be examined as a site for epistemological activism in service of cognitive justice for their knowledges. Problematizing the assumption that only academically qualified researchers facilitate collaborative knowledge-making was an unexpected opportunity during Covid-19. It motivated contribution to CODESRIA 50th Anniversary General Assembly on the theme "Pandemics, Epidemics, and the Imperatives of Social Transformation". This accepted conference paper was invited for journal submission after revision. Using a rich set of data from design-led participatory action research with transformative intent this paper aims to contribute actionable insights on leveraging facilitation as a decolonial intervention. Facilitation, as a front-end planning process, and, as an active site for implementing cognitive justice, was co-created remotely with a team of youths from Nairobi's informal settlements. Team independently facilitated 27 workshops with 47 informal traders, completing 3 sequential sessions with 8 groups. Team documented the entire project on video, translated and transcribed all dialogue, including follow-up surveys and video interviews one year later. This comprised Team's own training in community journalism as the selectively recruited 2020 cohort at K-Youth Media Foundation, a project collaboration partner. The author reviews, analyses, and reflects on the entire experience using epistemological and epistemic positionalities as analytical tools. Findings include the instrumentality of recognizing, identifying, and clarifying communicative positionalities of all concerned related to knowledge when aiming to facilitate cognitive justice. This upfront yet invisible epistemic labour tends to go unrecognized. When articulated and applied, it is seen to result in transformative outcomes for all stakeholders.

Keywords: Cognitive justice, indigenous knowledge, facilitation, decolonial intervention, participatory action research

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By

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Introduction

Cognitive justice, an idea rooted in decolonial thought, advocates for active engagement with a plurality of knowledges (Visvanathan 1997). This "requires creating a space where traditionally excluded actors are not forced to conform to Western knowledge structures and standards" (Rodriguez, 2017). Creating such a space cannot be realized without decolonizing methodology (Ndlovu-Gatsheni 2018:30). Decolonizing methodology means "the worldviews of those who have suffered a long history of oppression and marginalization are given space to communicate from their frames of reference" (Chilisa 2019:11). Such a space instantiates "epistemological conviviality" that privileges “togetherness, interdependence and intersubjectivity” (Nyamnjoh 2012a). That is, creating just and equitable epistemological relations with indigenous knowledge-holders can be said to be a decolonial form of knowledge production.

One challenge experienced by indigenous knowledge-holders is how to co-create from their own epistemological standpoint (Iddy 2021; Foley 2003) rather than struggle with those imposed on them by the hegemonic knowledge system. Indian scholar Shiv Visvanathan explains the birth of 'cognitive justice' in response to the requests by indigenous knowers of ancient textile technologies for an equitable opportunity to co-create knowledge with visiting 'experts' from Sweden (2021). Their resistance to simply being given 'bits of European modern knowledge' (Singh 2021:1168) as passive beneficiaries led Visvanathan to reframe their participation as a form of negotiation of the hierarchy of knowledges (Visvanathan 2005). Presence in the form of participation was not enough for cognitive justice, the Indian weavers also wanted cognitive *representation* through recognition of their own knowledge and its deep interconnection to their livelihoods, life chances, and life styles (Visvanathan 1997). Only then would they be cognitively *empowered* when engaging with the foreign experts. Together cognitive *representation* and cognitive *empowerment* in addition to participation constitute cognitive justice (Visvanathan 2005:88).

Implementing cognitive justice is a form of epistemological activism, as argued by JN Singh (2021), for whom "social justice is not purely an epistemic issue but must include epistemological activism" during the knowledge production process (2021:1169). Such an engaged form of knowledge production falls in line with Dr Bagele Chilisa's call to contest the continued suppression, marginalization, and silencing of the knowledge traditions of "formerly colonised, historically marginalised, and oppressed groups" (2012; 2017; 2019). Any methodological attempts to implement cognitive justice for indigenous knowledge-holders must therefore align with their own knowledge traditions and practices. Summarizing Chilisa (2019), participatory approaches align with postcolonial indigenous research paradigms when their purpose and agenda is centred on the needs and aims of the community involved. The creative process must resonate with relational axiologies and epistemologies, and facilitation guided by the principles of Respect, Relationality, Reciprocity, accountable Responsibility, and the Rights and regulations of the community. Embedded is a potential for transformation and healing.

One area in the knowledge production process that tends to get overlooked is that of facilitation. Participatory transformative research is introduced by Chilisa as a methodological

perspective that aligns with the postcolonial paradigm (2019:275). However, little mention is made of facilitation in either the definition of the approach or the descriptive text regarding its implementation. Group facilitation skills are mentioned once on pg. 272 as a research challenge, without discussion on the instrumental role played by facilitators in ensuring the epistemological, ideological, and philosophical aims of the change in paradigm are met. When facilitators are mentioned, it is a third person reference to the author and her research team, or when describing other researchers in case studies. That is, the unexamined assumption throughout is that knowledge production is facilitated by formally designated (academically qualified) 'researchers'. However, it was the pandemic that provided unusual conditions for interrogating exactly this assumption, which otherwise may never had happened. This motivated the author's contribution to the 50th Anniversary General Assembly's call for papers to the topic of "Pandemics, Epidemics, and the Imperatives of Social Transformation".

As the locus for instantiating cognitive justice in praxis, facilitation as a well prepared and carefully designed phase of activities can offer a fruitful avenue for fostering agency for transformation among indigenous knowledge-holders. In responding, the author contributes a reflexive analysis of the empirical case involving a young team of novice facilitators from Nairobi's informal settlements. Enskilled over Zoom in creative design practices and innovation group work, the team implemented a sequence of participatory engagements that aimed to foster innovation-led self-determined socio-economic transformation among informal traders of fresh vegetables (mama mboga) to support growth and resilience during the first wave of the pandemic.

How facilitation became the site for mobilizing epistemological activism is the theme that guides and structures this paper.

Facilitation by, with, and for Indigenous knowledge-holders

Scholars working at the interface of Indigenous knowledge traditions consider facilitation a crucial but under-studied theme (Ngwenya & Hagmann 2009; Romm 2015; Assefa 2021) although the impact and role of skilled facilitation in mobilizing transformative change is well recognized (Abdu-Raheem & Worth 2012; Lefore 2015; Devaux et al. 2016). This perhaps may be due to the fact that "facilitation is often provided by international partners, such as advanced research institutions or non-governmental organisations (NGOs)" which creates then dependence on "external consultants to facilitate innovation and change processes" (Lefore 2015). Further, this external knowledge remains tacit, as Devaux et al. elaborate on the case of "researcher-practitioners" with first hand experience of innovation facilitation for groups:

> "The experiences of such people, particularly those more involved in practice, often remain undocumented or are only partially captured in reports and unpublished documents. [Critical reflexivity] specifically designed to capture and document the experiential, tacit knowledge of the practitioner (Schön 1983)"[is thus required]. (Devaux et al. 2016:306-7)

"And (linked to this) there is scant reference to how facilitators might pay attention to epistemological issues concerning styles of knowing that can be activated during the discussion" (Romm 2015). That is, not only is there a dearth of knowledge on facilitation of innovation, and for social transformation, in the African context, but there is a particular gap in facilitating with indigenous knowledge-holders. While the geographical focus of their book is Canada, Burkholder, Aladejebi, & Schwab-Cartas (2022) make clear the assumption running through the majority of scholarship on ethical and methodological considerations of facilitating knowledge production with Indigenous and other minoritized groups is that facilitation is conducted by experts with advanced educational qualifications. This assumption is also reflected in the majority of the literature reviewed in the African context as well, where authors tend to be the facilitators themselves or assume that facilitation is the accountable responsibility of the experts.

Interestingly, it is again from Canada where we find an example of community members enskilled as facilitators to work with Indigenous knowledge-holders (Marsh, Marsh, & Najavits 2020). The impact of implementing this approach to facilitation was such that it compelled the

authors to focus their article on "the Indigenous facilitators who were recruited and trained to conduct the sharing circles as part of the research effort" (Marsh et al. 2020). They describe the training program and impact of this on the facilitators, and relatedly on their clients. What is of interest from the perspective of facilitating knowledge production with indigenous knowledge-holders is that the facilitator training program was predicated on the notion of 'Two-Eyed Seeing' where "Two-Eyed Seeing is a decolonizing methodology that blends Aboriginal and Western research methods, knowledge translation, and program development" (Marsh et al. 2020:3).

> "The Two-Eyed Seeing framework was utilized in this research because it recognizes Indigenous knowledge as a distinct epistemological system that can exist side by side with mainstream (Western) science [and] advocates for inclusion, trust, respect, collaboration, understanding, and acceptance of the strengths that reside in both Western and Aboriginal worldviews" (Marsh et al. 2020:3-4).

Hassan Iddy (2021) notes that such concepts developed in Canada, Australia, and New Zealand to guide the conduct of research with Indigenous knowledge-holders have yet to become more popular in the African context. He argues for communities to be re-positioned as 'knowers' in their own right, rather than simply 'informants', echoing Chilisa (2019) and Smith (1999), and goes a step further in saying "The investigator does not enter the indigenous society as a knowledgeable person, but as someone who, in collaboration with the members of the society, co-constructs reality" (Iddy 2021:386). For developing his argument, he embraces Indigenous Standpoint Theory (IST), widely used in the above mentioned countries, and attributed to the Australian Indigenous scholar Dennis Foley (2003). IST, as interpreted in the Tanzanian context, supports the argument "that people need to be understood within their social, political, cultural and historical contexts" (Iddy 2021:386) i.e. from their own standpoint. And, IST advocates for knowledge to be created by members of the same community since no outsider "been socialised in the indigenous group and therefore possesses little or no experience of indigenous life, hence he/she cannot comprehend the complexities of the group at the same level as an Indigenous researcher" (Foley 2003:46 cited by Iddy 2021:386). This reflects the logics of enskilling community members as facilitators for knowledge to be co-created with indigenous knowledge-holders (Marsh et al. 2020).

Joseph Pesambili (2021) reflects on theoretical and practical aspects of the encounter between Indigenous and Western knowledge among the Maasai in Monduli, Tanzania. Even though decolonization is well underway on the theoretical level, knowledge production may still be "reliant on conventional methods without fundamental changes at both technical and practical levels (Gobo, 2011)" (Pesambili 2021:407). Echoing the scholarship on facilitation mentioned above, Pesambili points out that "literature on Indigenous methodologies" including seminal books such as Denzin, Lincoln, & Smith (2008) "give much space to epistemological assumptions, but not technical proposals" (Pesambili 2021:407). As the author's review of Chilisa's seminal 2019 book also found, mention of the technicalities of facilitation of participative approaches to co-creation remains sparse. What is relevant from Pesambili's "practical framework for exploring a dialogical exchange between Indigenous and non-Indigenous knowledge systems" (2021:409) is that it is based on Martin Nakata's theory of a Cultural Interface – a metaphorical space that non-Western scholars will recognize from their own lived experience of navigating tensions and contestations between their indigenous knowledge traditions and those of the Euro-Western academy.

Co-creating cultural interfaces between knowledge traditions

Theorized by reputed Indigenous academician Dr Martin Nakata as a highly politicized and contested metaphorical place where the hegemonic Western Knowledge System meets Indigenous and other non-Western Knowledge systems, the Cultural Interface is also recognized as an opportunity space for creativity and innovation to flourish (Yunkaporta 2009:53). Nakata's theory contains within it the potential for reconciliation through a search for common ground in order to co-create shared meaning at the points of overlap where (often) incommensurable knowledge systems come together (ibid). And importantly, Nakata resists emphasizing differences that culturality as a concept foregrounds, thus he uses the term Cultural Interface to connect with

common understandings but it is not restricted to cultural specificities (Nakata 2007). Elaborating on the interface in Nakata's own words:

> "It is a multi-layered and multi-dimensional space of dynamic relations constituted by the intersections of time, place, distance, different systems of thought, competing and contesting discourses within and between different knowledge traditions, and different systems of social, economic and political organisation.
>
> It is a space of many shifting and complex intersections between different people with different histories, experiences, languages, agendas, aspirations and responses. [...] these sets of relations shape the personal and interpersonal, the textual and inter-textual, the discursive, the inter- and intra-discursive, the theoretical and the structural and institutional frameworks through which people are understood, explained and regulated, and through which they understand, contest, resist, explain, self-regulate and uphold themselves." (Nakata 2007:198-200)

Nakata's cultural interface theory thus also describes the highly contested and politicized metaphorical space where the 'power struggle between researcher and researched' (Chilisa 2019; Smith 1999) manifests. For facilitation that aims to mobilize creativity and innovation of indigenous knowledge-holders to foster their own self-determined societal and social transformations, converting this metaphor into practical action is key to success. That is, it requires a form of social interface design that is more pragmatic, contextual, and technical, working on the process, the practices, and the agenda. This echoes Pesambili's arguments for pursuing the practical actions involved in implementing just, plural and equitable knowledge production (2021:407).

Understood in this way, facilitation can therefore be designed to implement Visvanathan's notion of cognitive justice for indigenous knowledge-holders by instantiating a cultural interface where Western-theorized innovation approached are introduced, and, where implementation is held to be the accountable responsibility of facilitation. Accountable responsibility, as an ethical principle of postcolonial indigenous research paradigms, is articulated by Chilisa as the imperative to move away "from deficit- and damage-centered research to investigation that builds communities and restores hope and belief in their capabilities to resolve challenges that they encounter" (Chilisa 2019:221), thereby embodying the healing principle of the paradigm.

> "This requires that research participants play a pivotal role in making decisions on the research to be conducted, the research questions to be addressed, the analysis of the data, and the dissemination of findings" (Chilisa 2019:221).

Therefore, the cultural interface can only be co-constructed by the participants themselves, without the presence of any external expert who is not a member of the community to align with the thinking of scholars such as Iddy (2021), Chilisa (2019), and Marsh et al. (2020). That is, facilitation can be designed as a phase of epistemic labour by the entire research team at the front-end of participatory engagements with transformative intent.

In the view of applied linguist JN Singh, epistemological activism in all forms of spoken communication related to knowledge is required to resist coloniality (Singh 2021). Facilitation is one such structured activity with planned agenda of activities and interactions which involves spoken communication related to knowledge. When speakers communicate with each other in a language that is not their own first language, such as for example, in English, then resisting embedded coloniality in such intercultural communication becomes even more important (Singh 2021). Of note is Hamza R'boul's foregrounding of intercultural communication knowledge as a space for global cognitive justice (2022a). In his view, it is such intercultural communication where issues of power and distance become more visible and thus addressable (R'boul 2022b).

Therefore, in the context of this paper's motivations, facilitation can be considered a form of intercultural communication knowledge, whose well-planned and careful design as a phase of epistemic labour at the front-end respects indigenous traditions, recognizes indigenous knowledges on their own terms, and manifests an accountable responsibility. Hence, facilitation planning in intercultural contexts where a plurality of languages, worldviews as well as epistemological

traditions are represented may require its own previous inquiries with the community of interest to inform preparation and planning of the tasks involved at the front end of participatory engagement. This inquiry, however, can be understood to have occurred prior to this case, as will be elaborated.

The empirical case is now introduced before discussion. Emphasis is given to the touchpoints for epistemological activism in the author's approach to transformative participatory engagement. Singh's distinction of epistemological positionality from epistemic positionality as components of communicative positionality – the basis for facilitation - are used as sensemaking and analytical tools during reflexive analysis.

The Remote Resilience Project

The majority of Nairobi's food purchases are from informal trade, and the sales of fruit and vegetables is a leading source of income for many uneducated women in Nairobi's informal settlements (Owuor et al. 2017). When the Covid-19 pandemic was announced in March 2020, the Kenyan government shut down schools and churches; closed Nairobi's borders to all but essential traffic; imposed daily curfews; and restricted public gatherings of all kinds including closing hotels and restaurants. Informal traders bore the brunt as job losses took their toll, slashing incomes and reducing purchasing power across the board. Informal wholesale and retail trading provides incomes for 65% of Kenyans, and is the largest sector within the informal economy which employs almost 80% of all Kenyans (KNBS 2019).

The pandemic created crisis conditions not only for food security but also the socio-economic fabric of lower income communities in informal settlements. If this critical last mile failed to survive the pandemic, it could severely damage the communities' ability to bounce back and recover. Market women faced tremendous pressure to sell perishable fruits and vegetables before they spoil. The time pressure for perishable fresh produce to remain attractive for sale without refrigeration or cold chain remains the same regardless of pandemic conditions. That is, the risk profile of the informal perishable fresh produce ecosystem was disrupted. Traders' could not rely on their experience and past knowledge for estimating order quantities and timing of delivery. Travel restrictions increased volatility of timing estimates for transportation and order quantities. For micro-entrepreneurs operating in economic informality (Kinyanjui 2019) such as Nairobi's market women (Kinyanjui 2014) there was no safety net or state support. They were on their own. This motivated the author to take practical action in April 2020.

A consortium of three partners was convened by the author, comprising two NGOs: Humanity Kenya, a feminist NGO, and K-Youth Media Foundation, a non-profit established to enskill youth from Nairobi's informal settlements in journalism and new media storytelling. A small rapid response grant was raised for an intervention targeting 100 women: Humanity Kenya would send direct cash transfers to half the women, while the other 50 would be invited to participate in author's social design initiative. To facilitate implementation of the author's conceptual participatory engagement planned for 50 market women, K-Youth Media Foundation generously provided a project manager along with their 2020 cohort of 6 trainees (hereonward the Team) to collaborate over Zoom. Two-thirds of the small grant financed Team's stipends, local travel, and expenses for workshop venues, materials, hot meals for the participants, and other logistics. K-Youth contributed office space and internet access during training as well as audio-visual equipment for documenting all the sessions. Consortium partners themselves worked voluntarily during this challenging time for the most vulnerable in society.

Methodology and Approach

Participatory social design in the Nordic tradition aims to effect decisive, qualitative change in circumstances of otherwise disadvantaged groups by leveraging the capacities and skills of design (Markussen, 2017; Koskinen, 2016) to mobilize creativity of the participants themselves for innovation (Ehn 1993; Björgvinsson, Ehn, & Hillgren 2010). In this it resembles action research, although designers aim to extend the insights gleaned from reflection and co-creation of knowledge into practical outcomes.

> "Action research is a process of doing, reflecting on the action, drawing conclusions, and then reflecting again on the [iterations made to the] process." (Chilisa 2019:269)

That is, design seeks to convert knowledge into practical actions and may not involve a formal research component such as publication in peer-reviewed journals. The popular label of 'design thinking' captures the commonalities between the two processes, viz.,

> "...a process of enlightened trial and error wherein one observes the world, identifies the patterns of behaviour, generates ideas, gets feedback, repeats the process, and keeps on refining." (Author 2006)

Action research also describes the iterative nature of design process. Concept design is tested in the real world in the form of working prototypes which are then revised based on feedback from end-users to improve performance. One could say that when the object of design is the social, then the design process comprises of multiple embedded loops of action research. In the empirical case, the training programme for the facilitation team, the selection and recruitment of participants, the tools designed specifically to meet the needs of informal trade (Author 2009; 2018) and the workshops and their sequence, are moving parts of the whole and are iterated for improving fit for purpose. "Fit for purpose" here means evaluating facilitation of the cultural interface being instantiated during implementation of the program with indigenous knowledge-holders and is therefore the social goal of the design process.

Case studies on facilitating participants' grasp of new methods and practices for design and innovation recommend a sequence of sessions (Sautier et al. 2017). Single sessions do not suffice, and three unrelated workshops will not achieve the same impact as well-designed sessions that sequentially build on each other to develop familiarity and skills with novel tools (Sautier et al. 2017). In their case, a board game had been designed for livestock farmers to explore the complexities involved in iterating the design of grassland farming systems in response to changing climatic conditions. The pandemic's systemic shock on the informal trade in fresh produce echoed the need for traders to also explore impacts of changing conditions and develop their own responses. However, a game was not considered appropriate nor feasible for the context.

Therefore a sequence of three participative sessions was conceptualized, taking the form of workshops utilizing design methods for mobilizing *collaborative creativity* i.e. co-creation, as defined by Sanders & Stappers (2008). The agenda of each workshop in the sequence was designed for a particular temporal horizon: the short-term, meaning the immediate aftermath of the first wave of the pandemic; the medium term, meaning the intermediate period of uncertainty due to the unknown duration of the pandemic; and the longer term, meaning the reconfigured operating environment for informal trade in the aftermath of the entire duration of the pandemic period, when 'new normal' had emerged and stabilized.

As introduced, social design's aims are to effect decisive qualitative changes in the circumstance of groups who may otherwise be disadvantaged in their societies by leveraging the capacities and skills of design. Here, the author's belief was that the continuous learning provided by instituting design thinking's reflexive and iterative cycles of testing novel ideas and practical innovations in trade would help enhance the vegetable vendors' established strategies and practices for resilience.

Participatory design

The sequential workshops introduced well-established creative practices from design thinking for collaborative sensemaking of the problem space; navigating collectively and individually towards solution ideation (goal setting and roadmapping); testing innovation ideas; as well as planning tools to support business development in economic informality. Given for each of the three workshops are its temporal horizon, the aims of the workshop agenda, and the workshop's targets or goals. These are summarized in Table 1.

Table 1: Design elements of the sequential workshops comprising the participative engagement

Workshop	One	Two	Three
Temporal Horizon	Immediate	Intermediate	Long Term
Aims	Solidarity	Planning	Inspiration
Design goals	Sensemaking and Problem Identification	Goal Setting and Roadmaps	Using mobile phones for business development
Targeted Outcome	Motivation	Innovation Skills	Transformation

Planning Tools for Economic Informality

At the time of project inception, in April 2020, any knowledge of the emerging future was only conjectural as the global nature of the Covid-19 pandemic only became obvious by the end of March 2020. Already in the first wave, when this program was implemented, informal trade was reeling from effects of lockdowns, curfews, and mass unemployment in the first wave. Therefore, two tools were developed for introduction: A visual tool for collaborative sensemaking of the wholesalers' regional supply and demand networks *before* and *after* the imposition of pandemic restrictions to help them identify bottlenecks and breakdowns. A second tool was designed to help with planning perishable inventory and managing household expenses in conditions of uncertainty and volatility. The design of both tools based on the author's previous design inquiries on the dynamics of informal cross-border trade in the East Africa Community (authors 2018); innovation transmission among farmers in rural Kenya and India (authors et al. 2014); and rural household financial practices in The Philippines, India, and Malawi (Author 2009). Only the Livelihood Priority Map (LPM) was designed specifically for this project. Table 2 summarizes the tools.

Table 2: Tools introduced to help facilitate aims

Business Tool Elements	Livelihood Priority Map (LPM)	Informal Trade Value Web (Authors 2018)	Mobile Phone
Purpose	Navigating volatility and unpredictability	Collaborative sensemaking of impact of event	Business tool
Utility	Planning, Savings, Inventory purchase and household expenses	Visual representation of supply and demand flows of goods, services, money, and information	Customer acquisition, sales, promotion, marketing, cost savings, time saving
Temporality	Flexible and Negotiable	"Before" and "After" Pandemic	Flexible and Negotiable
Technology	Paper and pen	Paper and pen	Feature phones or smartphones; cameras, social media platforms both global and Kenyan

Reflexive Analysis

The Covid-19 pandemic created unique conditions for the production of knowledge as elaborated in the call for papers. The author's decision to respond to the topic of "Pandemics, Epidemics, and the Imperatives of Social Transformation" was motivated by the imperative of social transformation related to the operating conditions created by the pandemic, not only for the intended participants of the social design and youth from their own neighbourhoods who would go on to implement the entire project, but also for the author in their role of researcher. Therefore, this section includes details on participant group formation and recruiting as well as the young team's facilitation skills development. This may affect expected chronology of the research narrative since author began remote collaboration with Team well in advance of completing participatory workshop design, research agenda, or even selection of participants to remain true to indigenous research paradigms.

Three key touchpoints were identified as moments when epistemological activism was facilitated for resisting coloniality in the knowledge production process, where facilitation can be considered a form of communication. Singh describes epistemological activism as an outcome of more closely interrogating our communicative positionalities (2021). In order to do this, Singh conceptually distinguishes two forms of communicative positionalities related to knowledge, viz.,

> "first, *epistemic* positionalities describe *what* knowledge speakers make pragmatically relevant in instances of communication, and second, *epistemological* positionalities describe *how* speakers metapragmatically theorize the knowledge they make or do not make relevant in communication." (Singh 2021:1168, original emphasis)

These two aspects of communicative positionalities offer tools for reflexive analysis as follows.

1. Participant recruitment and group formation

The target audience for this intervention were key actors in ensuring food security for Nairobi's most vulnerable residents (Owuor et al. 2017), that is the last mile of sourcing and supplying fresh vegetables in the informal settlements. Informal groups of wholesalers collaborate in Nairobi's central markets to organize financing and transportation of perishables without access to cold storage in the supply chain. In turn, individual women traders purchase from them to resell to households in residential neighbourhoods. Mapping the customer journey of business development of market women from vegetable vendor (B2C) to wholesale retailer (B2B) makes visible a complex web of relationships established and maintained for securing continuous flow of revenues for investment in running trading business operations (Authors 2018). Therefore they were considered as two separate categories of market women.

Vegetable vendors (known locally as *mama mboga* in Kiswahili) tend to operate individually in scattered locations primarily in residential areas while the wholesalers may often cooperate informally, trading on a much larger scale, have access to informal finance through traders groups and market associations, and are located mostly in the main wholesale markets of the city. This in turn influenced the recruitment of the different categories of traders and their group formation. Wholesalers were asked to invite others to join their groups, while vendors were individually invited thus their group formation was more random since they may not know each other previously. Similarly, wholesalers tend to specialize in a particular fresh produce which informed their groups, thus this same logic was followed for creating the groups for the vendors although they may offer a few more varieties of produce albeit in very small quantities.

This interrogation of the epistemological positionality of 'one size fit all' in a research context where all market women (and informal traders) regardless of their scale of operations tend to be lumped together as 'hapless victims' reflects the sort of misrepresentation that, according to Kinyanjui (2010), the late Dr Thandika Mkandawire was referring to when he said "[it] denies us the opportunity to think creatively of modes of social organisation at both macro and micro level" thereby leaving the "door wide open for unlimited intervention" and dissipating "whatever enthusiasm the locals may have had for development" (Mkandawire 2001:310). Chilisa reminds us that such epistemological positionalities are based on hegemonically disseminated “theories and knowledge unfavourable to the colonized Other” (2012:59). How we theorize the knowledge we

make or do not make relevant during communication with the traders – our epistemological positionality - is a function of the way we perceive them i.e. hapless or intrepid? skilled traders or illiterate women selling tomatoes? Our representation of our audience is a function of our research paradigm. The first step in implementing cognitive justice for the participants thus begins with approaching them more closely to discern the nuanced details of their skilled trade, and thus their related knowledge. Odora Hoppers has pointed out indigenous knowledge traditions were also relegated to the informal as part of coloniality (2002:iv).

The Kenyan National Bureau of Statistics Report of March 2021on pandemic food security tells us that fresh vegetable supplies never faltered in Nairobi, and households surveyed experienced no scarcity of perishables such as kales or tomatoes. Prices rose as would be expected but even low income neighbourhoods reported availability. Nairobi's informal wholesale markets – the regional hubs of fresh produce trade - continued to source and supply fresh fruits and vegetables from across East Africa. The last mile of the informal urban food system - the mama mbogas and the wholesalers - did not fail to put food on their customer's tables; persevering in the face of curfews, lockdowns, delays in transportation, and volatility of cash flows. This well documented fact points to an unrecognized but deep well of indigenous knowledge underpinning the commercial activities in the local and regional informal economic system. It takes more than skill, experience, and a willingness to absorb the risk of wasted produce without cold chain facilities, under the hot sun, to provide fresh fruit and vegetables in an edible condition attractive to customers. Not recognizing this knowledge is tantamount to injustice (Odora Hoppers 2021).

Categorizing participants into B2B and B2C thus informed our epistemological positionality for workshop agendas. Team conducted a brief survey on their business as part of the recruiting including the difference before and after pandemic as a baseline. Their data suggested that B2B groups own smartphones whereas vendors tended to cheaper feature phones with longer battery life. These details informed our workshop agenda preparation and planning. Table 3 reflects the research team's epistemic labour involved in group formation and recruiting, in line with Iddy's observation to know the context, operating conditions, the situation in addition to the people (2021).

Table 3: Participant groupings, categories, sizes, locations all together inform epistemological positionalities

Groups Primary fresh produce sold	**Category** Role in the urban informal food system	**Group Size** (n=50)	**Location of Workshops**	**Recruitment**
Kales (*sukumawiki*)	B2B	5	Korogocho Market	Snowball
	B2C	8	Korogocho villages	Random
Tomatoes	B2B	4	Marikiti Market	Existing cooperative
	B2C	8	Mathare Valley	Random
Bananas	B2B	4	Korogocho Market	Snowball
	B2C	8	Baba Dogo	Random
Onions	B2B	5	Marikiti market	Snowball
	B2C	8	Donholm	Random

It is here that nuances of facilitation design become obvious. That is, although Singh distinguished communicative positionalities related to knowledge from the perspective of speaking (2021), recognizing and clarifying various epistemic positionalities and disentangling these from epistemological positionalities is clearly also required for interface design planning. At the paradigm level, this speaks directly to relationality, one of the core principles of indigenous

knowledge traditions (Chilisa 2019). Team's choice of locations, for example, was informed by their own network of relationships. As the team leader reflected later, the most difficult facilitation experience was with the onion B2C group since no-one on the team had any connections with Donholm informal settlement. On the other hand, nobody wanted to contain the novel knowledge within in the same neighbourhood for more than one group. This in turn reflects the way knowledge is recognized as dynamic and relational within indigenous knowledge traditions (Iddy 2021; Pesambili 2021). Undertaking such epistemic labour may thus directly contribute to skilled facilitation with indigenous knowledge-holders, recognized for its transformative potential (Romm 2015; Lefore 2015; Ngwenya & Hagmann 2009) even as it aligns with the paradigm's principles.

2. Implementing the social design initiative

The participative nature of the intervention and the design constraints of the pandemic necessitated the remote enskillment of a team of local youths as innovation facilitators. These conditions illuminated the complexity and plurality of epistemological and epistemic positionalities involved that needed to be navigated carefully and thoughtfully for communication. However, and at the same time, Singh's analytical tools were not available to the author back then and are only the fruits of reflection and study. If they had been available during implementation, it would have made a significant difference to the learning process.

That is, it is only now that one recognizes that it is our degree of separation from the end users of our work which makes us cognizant of our epistemic positionality - what we make relevant when communicating - even while we must take into account our epistemological positionality with regard to the target audience of our design actions - theorizing what we must make relevant or not make relevant for them. In this case, the actual partners in co-creation for the project designer were the team being enskilled over Zoom to implement the programme independently, but the end-users of the collaborative design actions were to be the vegetable vendors and wholesalers.

Table 4: Team profile including age at the time of the 2020 pandemic and their educational qualifications

First Initial	**F**	**M**	**S**	**A**	**L**	**O**
Role	Team Leader	Facilitator	Facilitator	Facilitator	Audio-Visual	Audio-Visual
Gender	Male	Male	Male	Female	Male	Female
Age	24	26	25	25	25	25
Education	B. Sc Food Science & Technology, University of Nairobi	Diploma in Communication Daystar University	Certificate from K-Youth Media on Film & Photography	Journalism with Public Relations Concentration	Diploma in accounts & Certificate from K-Youth Media in Film & Photography	Diploma in Communication Daystar University

In all aspects of this project's implementation on the ground in Kenya, the young team took the lead. All 27 workshops and training sessions are documented on video. Team transcribed and translated these into English. Of the 50 invited participants who consented by signing our form (following university data policy), 47 completed the entire sequence. 32 were reached one year later for follow-up survey, of which 10 were shortlisted by team for video interviews.

So, the designer's epistemological positionality to the end-users of their work was indirect but this had to be recognized and clarified, in order to clarify the epistemic positionality of the interlocutors of design actions i.e. the facilitators. Theorizing what needed to be made relevant for end-users had to include theorizing what therefore must be made relevant for the novice facilitators. These two parallel yet complementary strands of epistemological positionalities intertwined during training, and informed design of lectures, selection of reading materials, and the discussion sessions. Author had to go the extra mile in role modelling facilitation of group work over Zoom in order to ensure Team would then accrue the experience that they could then co-create with the participants. Technological intermediation due to using Zoom, network connectivity, discipline-specific jargon and lack of personal contact all raised their own hurdles to be crossed in this work.

Only by experiencing their own creative agency in the first place would they gain the confidence to facilitate the same for the participants. Transformation cannot be prescriptive nor descriptive, it can only be experienced (Duncan et al. 2018). In such cases, mapping the relative

degrees of separation of the researcher and/or designer from their target 'end-users' as well as between all other stakeholders such as the facilitation team in this case can generate useful upfront relational knowledge and identify touchpoints for recognizing and clarifying the relevant and appropriate epistemological and epistemic positionalities of all concerned. Disentangling these aspects of our communicative positionality thus becomes important epistemic labour at the front end and facilitates good relations. This work supports the need for deep reflexivity (Chilisa 2019) and contributes to both cognitive *representation* and thus cognitive *empowerment*, in addition to participation; together comprising cognitive justice (Visvanathan 2005:88). This is elaborated on further in the next section.

3. Implementing the participatory innovation workshops

Design thinking promotes an intermediate step between conceptualizing a plan of designed action on paper and its launch into public. This is variously called prototyping, working prototype, or prototype testing which may or may not occur in real world conditions depending on the object of design. In this case of participative social design, running a live pilot of the sequence of workshops planned for each category of participants was the only means for research team to work out the details of implementation such as translocating the agenda and novel tools from the English language and disciplinary jargon the author may have used during training into the context-specific language such as Sheng (Githiora 2002) and Swahili that they would use with the participating market women. Even the use of these Kenyan languages may create conditions for intercultural communication given Kenya's population comprises over 40 different language groups. Therefore translating concepts was not enough, they had to be communicated at the level of first principles for team to grasp them rapidly and well enough to instantiate at the cultural interface. For example, could team simply translate "horizon scanning" and "scenario planning" or would they have to interpret the concept and explain it to wholesalers (B2B groups) along with the use of sticky notes? If so, how would this occur? Would "brainstorming" mean anything to the vegetable vendors even after translation into Swahili? Implementing our ideas in practice was the motivation for running a live pilot with the ladies in the B2B and B2C tomato groups. Given that they would have to independently complete 19 more workshops with 6 more groups, this pilot was their only opportunity for guided skills development. In between sessions, we met on Zoom to reflect on the experience, elicit suggestions from the team, and collaborate on the iterations made to the program design.

It was here that the need to disentangle the epistemic positionality of the facilitators from the epistemological representation of the participants was made obvious. After the very first prototype workshop, one of the facilitators asked the author during the feedback session what he should do when he feels lost for words in response to participant questions. He felt pressure to give them advice on their business but he knew nothing about selling vegetables. What his question raised was a need for the author to clarify and scope the facilitator's role and situate the expertise and experience of the participants vis a vis their own.

Participatory design research approaches centre participants as the recognized experts of their own experience (Gregory 2003) i.e. in vegetable vending. It was not necessary for a design and innovation facilitator to have all the answers nor was it expected of him. He should not feel that way. Instead, he should see his role as a facilitator of participants' own journey of solution discovery through experimentation and innovation. Relatively speaking, he was the expert in "innovation facilitation" and creative methods and tools. This took the pressure off him to be the expert in the room in technical or domain knowledge and instead focus on facilitating participants' creativity and its expression. The team was inspired to use it as their opening introduction for the remainder of the program since it recognized their own knowledge and distinguished that of the participants. The team leader pointed out the benefits of doing this to the author in a telephone conversation:

> "Because M (his co-facilitator) would always start our sessions by saying "Mama, we don't know anything about the vegetable trade, you are the experts, we are just here to learn from you" I think the mama mbogas were emboldened to discuss ideas openly and without fear during this challenging time and also gained confidence to push back on the ideas we suggested

> if they didn't make sense. They felt safe to even reject them." (Call with author, 5th August 2023).

Clarification of roles and scoping of expertise areas during the training sessions contributed to the team's confidence in implementing the rest of the sessions independently. This sharpened Team's understanding of their own epistemological positionality thereby enhancing their performance i.e. their epistemic positionality during spoken communication. This also made explicit cognitive representation and promoted cognitive empowerment for both the facilitation team and the participating vegetable traders. Thus we discuss results of this program by reflecting on outcomes for all involved from the perspective of implementing Shiv Visvanathan's concept of cognitive justice (1997, 2005), a notion rooted in decolonial thought (Coolsaet 2016).

Discussion

Outcomes for participants

"Society thinks that because we are uneducated, we have no other option but to sell vegetables", says a mama mboga whilst reflecting on video, [participating in] "your program made me realize that I, too, am recognized and respected and can grow my business". Clearly, the market women struggled with the dominant narratives of damage-focused and deficit-laden representation of themselves, as decried by scholars (Kinyanjui 2010; Mkandawire 2001; Chilisa 2019). Transforming this self-image was an outcome experienced by the participants, in addition to their adoption of novel tools and skills (65.6% of follow-up respondents were still using the LPM one year later and just over a third had managed to grow revenues even after three waves of pandemic). As another said on her way out, quoting the team's own translation of her words:

> "Before the sessions I never thought we are an important segment of our economy. With the sessions we felt appreciated, valued, and treated like an important member of society who contributes to the economy and the food chain in the country." (Mama Mboga, age 58, exit interview, August 2020)

Discussion sessions developed for this purpose used illustrative examples and thick narratives from design ethnographies in economic informality as well as additional reading materials to foster transformation of team's epistemological positionality. Owuor et al. (2017), for example, demonstrate how vegetable vending not only provides a foothold for self-employment for less educated women but directly and indirectly contributes to the food security in Nairobi's lowest income neighbourhoods where our participants had been recruited. The epistemological positionality for the tools Team would introduce to the participants during the workshops also reflected their representation as skilled entrepreneurs (Kinyanjui 2014, 2019). The team leader observed in a phone conversation with the author that few, if any development programs in Nairobi's slums bothered to ask beneficiaries if their programme design fit the local context and user needs, whereas in this experience team had co-created it both with the author at the planning level and with the participants during implementation. As such, this supports an epistemic positionality that resists damage-focused and deficit-laden theorizing, in line with Chilisa's definition of accountable responsibility. It also points to the instrumentality of well designed and planned facilitation in this context.

Outcomes for facilitators

> "Actually [author] helped us in ways we didn’t know she would… I know the first time M had his first workshop as a facilitator, it was kind of a struggle for him and we could see and we even told him. But coming back to class, [author] gave feedback, and told him that maybe this is how you should go next time, this is how you should handle people. So the second time M facilitated, it was amazing. He was well coordinated, he knew how to handle his audience, he knew how to ask questions...." (Team reflection video, minute 7:06 – 8:28)

It was not the case that the author had expertise in facilitating interfaces where two or more indigenous knowledge traditions may be present alongside the academy's paradigms and practices. We, none of us had experience implementing participatory engagement with indigenous knowledge-holders, working to build trust and relations across distance, disparity, and disease. Making this inexperience explicit with the team put us all on an equal footing, regarding our epistemic positionality, regardless of the significant age gap, geographic distance, or perceived status of my university affiliation.

That is, we were entering untrodden territory of collaboration with "participants from different knowledge traditions" (Blomberg & Karasti 2012) together. On the other hand, Team had the lived experience and knowledge of challenges that our participants were facing as a result of the pandemic and the localities. They shared the same neighbourhoods, bought food from them, and for some, a relative was also a vegetable vendor. This was valuable knowledge highlighted by Iddy (2021) and Foley (2003). Team's ability to facilitate cognitive *representation*, in addition to participation (Visvanathan 2005:88) was thus made possible by articulating their own experiential knowledge and its relationship to the facilitation they were expected to do, and reflecting it back to them. This illuminated for them their own epistemological positionality which enabled them to make decisions on the ground. Visvanathan would call this cognitive *empowerment* (2005:88), the other component of cognitive justice.

> "... as sessions went by [with author], we would be like "aah I think this doesn't work and then maybe this would work better". Because if you are student, you will just be listening to the teacher and it would be very hard to tell the teacher at some point that you don't think this can work. Because it's a syllabus you have to follow. But with [author] it was really different.... because we would go to the field with whatever she had taught us and were like "noo I don't think this would work for them"... So I think at some point we felt like we were her colleagues because she was listening, she was like "Ok, so tell me what do you think can work? What do you think doesn't work?" (Team reflection video, minute 5:05 – 6:06)

The facilitators-to-be were also burdened by the lack of experience of their own capacity for self-expression, not even being able to speak up during ideation, much less experience of their agency for innovation (see Nyamnjoh 2012b). As facilitators, they would not be able to co-create the interface for participants, no matter how engaging or participative the tools and techniques we used in the workshops. Days of effort went into encouraging and exhorting them to speak up and push back at 'expert' statements. Facilitation both as verb and as a noun requires dormant (or suppressed) creativity to be mobilized. Their education system - a colonial legacy - discouraged and punished talking back to teacher (Nyamnjoh 2012b). As the team leader explained during Zoom training, he had only once in his life experienced being able to push back at the lecturer whilst feeling safe from repercussions. For Team, cognitive justice meant putting their experiential knowledge on equal foot as the authors, even if the latter was a grey haired elder twice their age.

Outcomes for researcher

Cognitive justice as a framework for integrating the epistemologies of interpreters and translators in multilingual research is the focus of Backhaus' dissertation (2022). The team was able to spark the participants' creativity for transformative innovation. For this to happen, a paradigm change had to occur for all of us. For instance, changing Team's epistemological positionality to help them see the mama mbogas the way author saw them (author 2017; anon 2018) was made possible by linking examples from their own lived experience to underscore the ground reality as the driver for our actions versus any externally theorized dominant narrative. That is, our discussion sessions transformed their epistemic positionality with the mama mbogas even as we co-created our own cultural interface between our respective knowledges. Over the years since, this experience led the researcher to interrogate their own epistemological positionality within the Euro-Western academy, and to recognize they too were operating from Nakata's cultural interface, an emancipatory experience that Ndlovu-Gatsheni describes so eloquently as epistemic freedom (2018).

I had to let go of control over quality of implementation and become comfortable with the idea that whatever will happen on the ground will never happen as I designed it to happen or as I would have implemented it personally. But, this was okay as long as the reason why I had incorporated it into the design initiative still happened. That is, the why became more important than the what for design planning of actions 'in the wild'. Why did we conceive this particular intervention? What were we aspiring to change, transform, or trigger? Did that happen? How it ends being implemented is outside our control when we design for others. What is important is that it fulfils its purpose. This was design at the level of first principles, where drilling down to first principles enabled our collaboration across different epistemologies, axiologies, and cosmologies in addition to ontology.

Letting go devolved all agency for implementation to the team, who would go on to use their own knowledge traditions. Left to their own devices, they instinctively implemented principles of Chilisa's postcolonial indigenous paradigms (2019). A crucial component of decoloniality in praxis: the shift in locus of power from the "foreign expert" to the members of the community thus took place via the facilitators themselves.

Conclusion

How facilitation became the site for epistemological activism, in line with postcolonial indigenous research paradigms motivated this contribution. The empirical case is compared against Chilisa's definition of participatory action research with intent for transformation (Chilisa 2019:276). Table 4 summarizes the evaluation and points out the outlier - here the author as researcher was not present on the ground in Kenya.

Table 4: Comparing with Chilisa's definition of participatory action research with intent for transformation

Chilisa's Definition (2019:276)	The Remote Resilience Project
Involves a whole range of powerless groups of people	Target audience were mama mbogas and their wholesalers, both operating as informal traders of fresh vegetables. The novice facilitator team comprised youth from their own neighbourhoods ("slums").
Involves the full and active participation of the community in the entire research process.	The novice facilitation team were responsible for all activities in Nairobi. They were involved in program co-design, knowledge production and co-creation.
Subject of research originates in the community itself, and the problem is defined, analysed, and solved by the community.	Workshop 1 was designed to facilitate participants' identification of subjects for their own research through a facilitation of the problem space navigation process.
Ultimate goal is the radical transformation of social reality and the improvement of the lives of the people themselves. The beneficiaries of the research are members of the community.	The ultimate goal was to interrogate dominant deficit-laden damage focused assumptions of market women. Was a vegetable woman from an African slum capable of innovation? Could design thinking empower them if indeed design was the miracle cure it was purported to be? And, did "the poor African" need foreigners for development and empowerment?
The process can create greater awareness in the people of their own resources and mobilize them for self-reliant development.	Cognitive justice benefits those whose own knowledge is recognized and then reflected back to them as their own resource, along with the experience and tools for mobilizing it for self-reliant development.
Participation of the community in the research process facilitates a more accurate and authentic analysis of social reality, making it a more scientific method of research	Multiple concurrent streams of knowledge production - the author's aims; the knowledge co-created within the community during the workshops; and the knowledge co-created by facilitators during their skills development process. Outcomes reflect on some of these.
The researcher is a committed participant and learner in the process of research, i.e. a militant rather than a detached observer.	The author was clearly a remote actor due to the pandemic. This is an outlier in the empirical case design and author had to learn to let go of control over the process in order for it to succeed. On the other hand, the author was certainly a committed participant and learner in

	the process of skills development for the young team of facilitators but only through the prism of the technological intermediation necessitated by the pandemic. That is, the community controlled the author's access to the knowledge production process and its outcomes.

Thus began the transformative journey of facilitation planning and preparation that transferred agency and locus of control over the knowledge production process to the indigenous knowledge-holders involved. In turn, they cooperated in order to convert Nakata's metaphorical interface between knowledge systems into practice actions by adapting and adopting externally-theorized tools and creative practices for their own knowledge traditions, community, and context. Along the way, everyone involved in this participatory engagement with intent to foster creative agency and motivation for innovative actions was transformed in a myriad of ways by the experience. A change paradigm for knowledge making can thus be said to also change our paradigm for thinking, whether it is our self-image such as that experienced by the vegetable vendors, or it is uncovering a long subdued creative spark such as mentioned by the young team of facilitators. For the author, the experience sparked a much needed displacement of epistemological positionality.

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